

Abstract

Method for routing of data packets and routing apparatus

5 In order to be able to use a smaller routing table (4) and,
thus, to reduce the costs and power consumption and to
improve the performance of an IP router, it is proposed to
extract a destination address identifier (ADR) from a data
packet to be forwarded by the IP router, compress the
10 extracted destination address identifier (ADR) by using a
lossless data compression algorithm, and compare the
compressed destination address identifier with entries stored
in the routing table (4) so as to find a correspondence
between the destination address identifier and one of the
15 entries of the routing table (4). Each entry of the routing
table (4) corresponds to a possible or available forwarding
address of the IP router, the forwarding addresses having
been compressed with the same data compression algorithm as
the destination address identifier. After having found a
20 correspondence between the destination address identifier and
one of the compressed forwarding addresses stored in the
routing table (4), a switch (6) of the IP router switches the
respective data packet to one of its output links (OUT) which
is associated with the respective forwarding address matching
25 the destination address identifier (ADR).

(Figure 1)